

Environmental Data Sources

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Data Sources

- WV GIS Technical Center (WVGIS)
 - Information center for everything GIS in WV
 - Training, professional directory, news, product info, etc.
 - <http://wvgis.wvu.edu/>
 - GIS Data link
 - <http://wvgis.wvu.edu/data/data.php>
 - Clearinghouse for WV environmental data
 - Query by subject and/or county
 - Provides direct access and/or links to offsite data
 - Public and restricted access data

Data Sources

- Geography Network, maintained by ESI
 - <http://www.geographynetwork.com>
- Geospatial One-Stop (GOS)
 - Federal clearinghouse for all types of Federal, State, and Local GIS data
 - www.geodata.gov
- Fish and Wildlife Service
 - <http://www.fws.gov/data/>
- Census Bureau
 - <http://www.census.gov/geo/www/tiger/>
- USGS
 - <http://www.usgs.gov/ngpo/>
- USEPA
 - <http://geodata.epa.gov/>

Mussel Survey Database- Why Do It?



- Alternative analysis
 - Better cost and time predictions
- Visual reference of past survey results
 - Programmatic in approach
- Determine if future projects need surveys
- Inclusion in endangered species GIS layer
- Develop good relationship with resource agencies

Mussel Survey Database- How did we develop it?



James Spiny Mussel

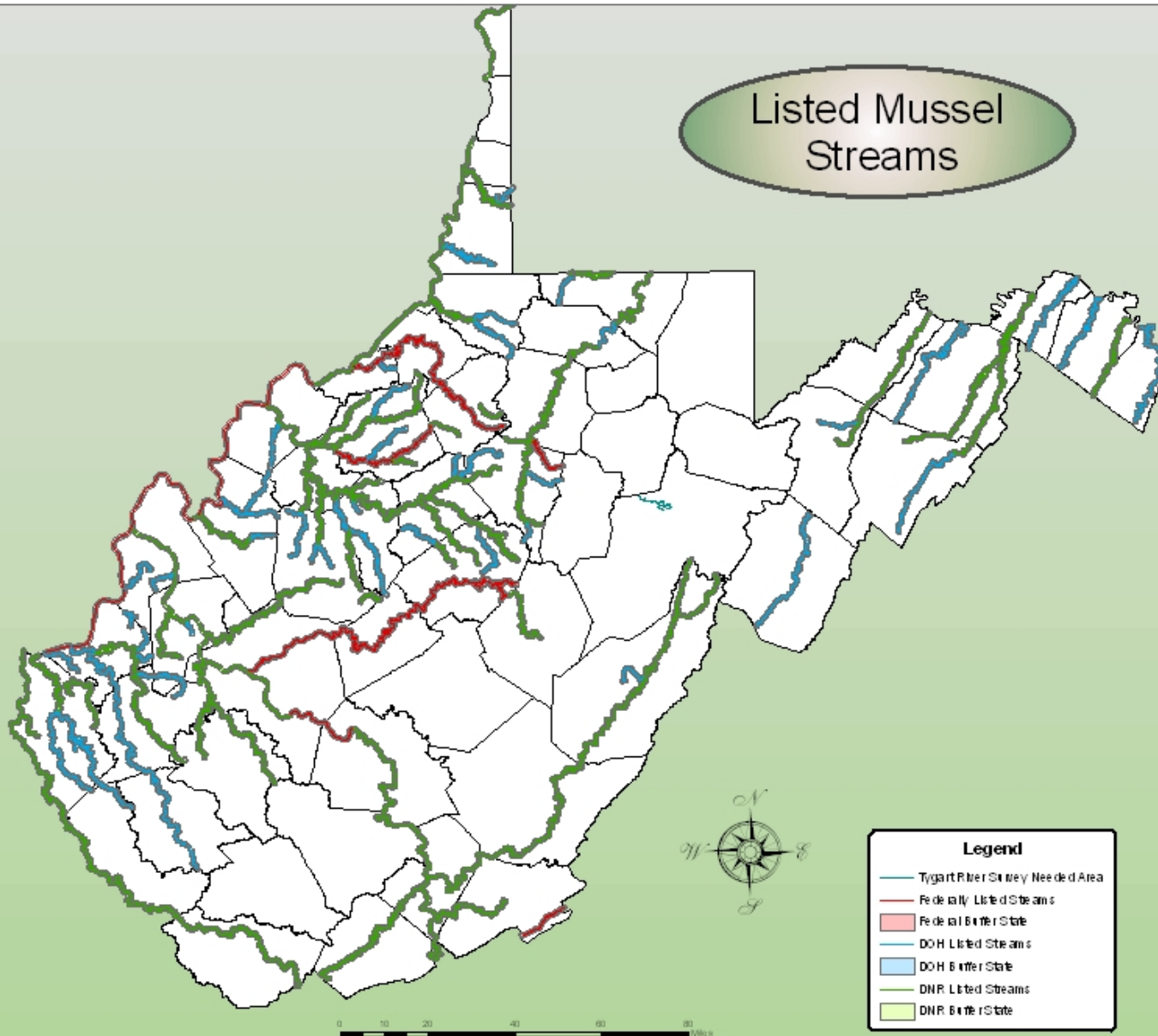
- Each survey that was done from 2002 thru 2006 and all future planned projects are entered into Databases
- These databases were saved and imported into ArcMap GIS software
- Shape files were created resulting in the following maps



West Virginia Division of Highways Environmental Section



Listed Mussel Streams

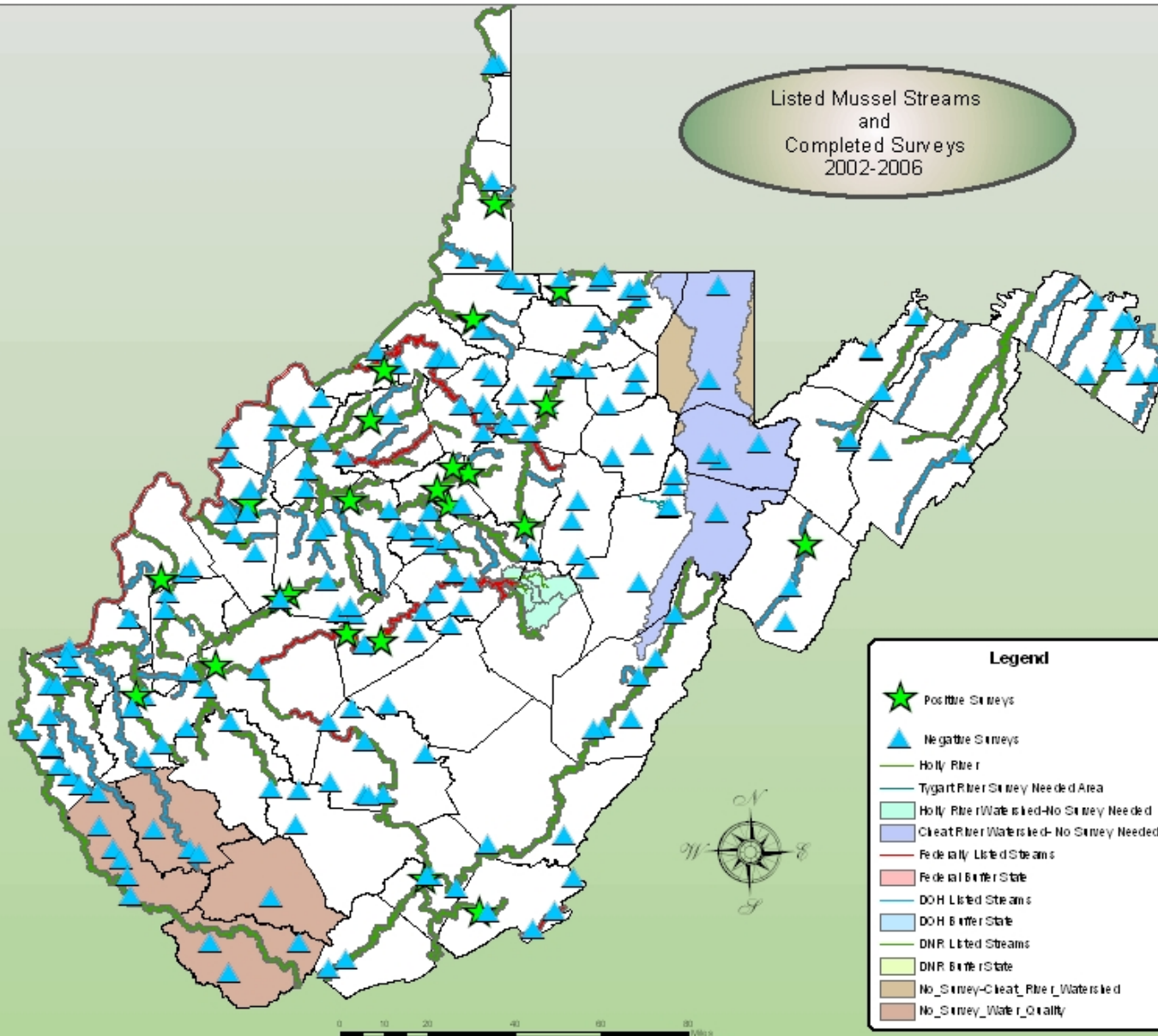




West Virginia Division of Highways Environmental Section



Listed Mussel Streams
and
Completed Surveys
2002-2006



Blanket Approval for Threatened and Endangered Species

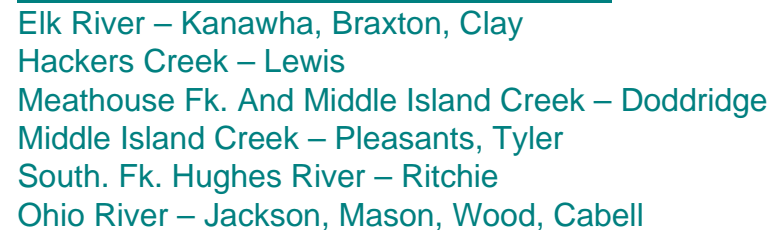
- Letter agreement between WVD OH and US Fish and Wildlife Service (USFWS)
 - Allows for WVD OH to internally screen some projects for potential impacts to threatened and endangered species
 - Agreement identifies areas where further consultation with USFWS is required
- Agreement is ONLY applicable to minor projects as defined in the letter
- Prior to the agreement ALL WVD OH construction projects were sent to USFWS for review
- Agreement is based on information provided by WVDNR, USFWS and WVD OH.

Initial Letter Agreement

- The initial letter agreement took effect March 15, 2005
- USFWS usually grants this type of clearance for a single type of construction activity for a single species
 - We requested state wide clearance for various species and construction activities
 - Took nearly a year to finalize
- Was based solely on county borders
 - 25 counties required coordination for all projects (blue counties)
 - 18 required no additional coordination
 - 12 counties required coordination for mussels
 - The area of the state (blue counties) requiring additional evaluation for ALL minor projects was reduced to 8,308,081.9 Acres or **53.6 %** of the state.

Covering projects not impacting 17 acres or greater of forested habitat or requiring an Individual Permit from USACE

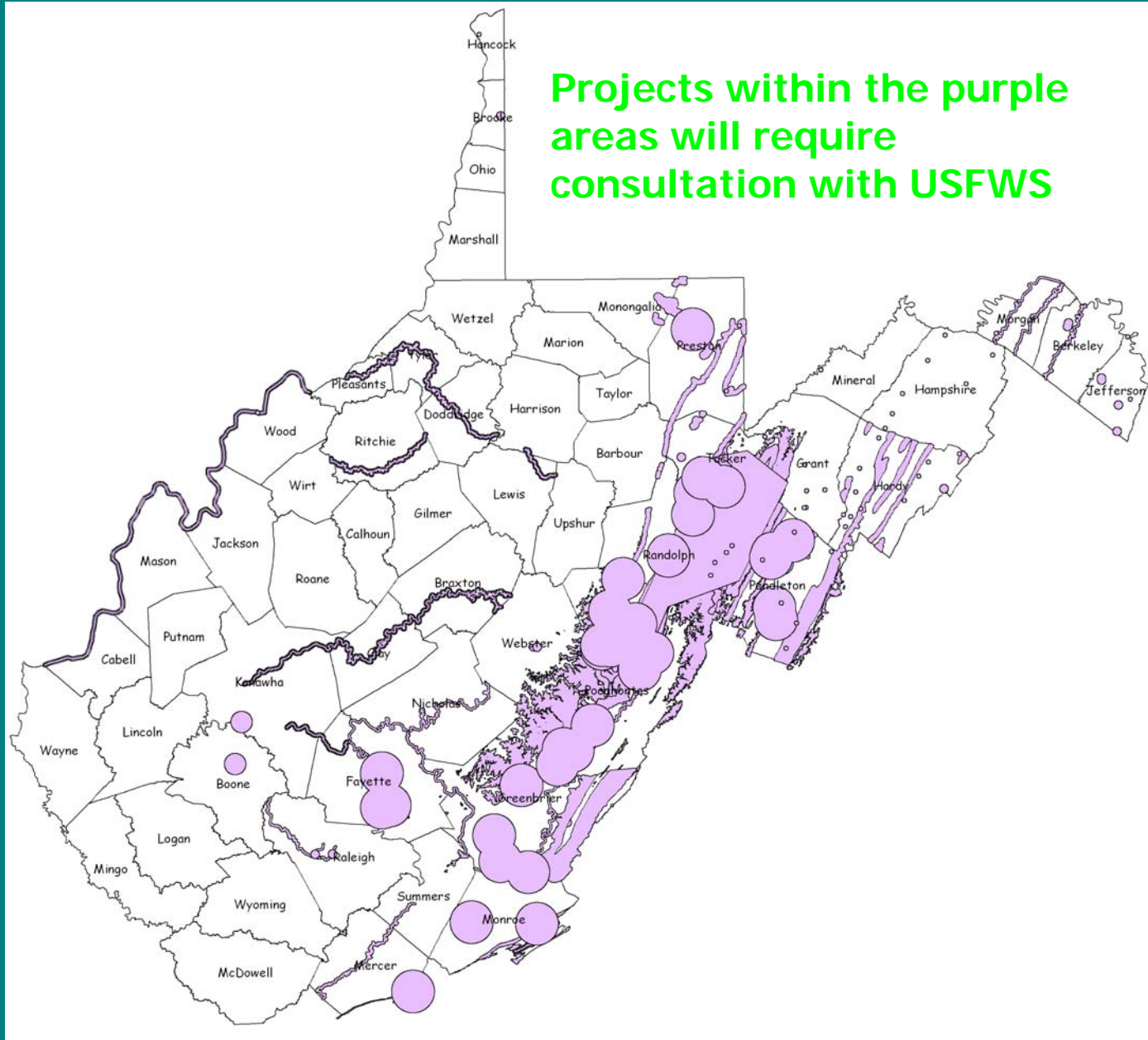
No Coordination with USFWS required for Threatened and Endangered species except for mussels. Refer to stream list below.



Current Letter Agreement

- Current agreement took effect may 16, 2007
- With the help of GIS portions of ALL counties are now covered
- New agreement eliminated the restrictions of the county borders.
 - It utilizes species specific habitat areas developed for each individual federally protected species
 - Habitat areas were developed with the help of the Service and WVDNR
 - Habitat areas were developed with consideration to species biology and specific highway construction activities
 - The area of the state requiring additional evaluation for all minor projects was reduced to 1,251,022.8 Acres or **8.1 %** of the state.

WV Threatened & Endangered Species



How does this help?

Streamlining!!!

- Expedite environmental clearance
- Reduce workload of WVDOH and the resource agencies
- Can be used in conjunction with other environmental data to:
 - Allow for selection of alternatives with more accurate cost & time estimates that are also less damaging to environment
 - Allow more environmental clearance at the District level



WV Yard Art